

A distinctive new Species and new Distribution Records of Stilbopteryginae (Insecta: Neuroptera: Myrmeleontidae)

C. N. SMITHERS

SMITHERS, C. N. A distinctive new species and new distribution records of Stilbopteryginae (Insecta: Neuroptera: Myrmeleontidae). *Proc. Linn. Soc. N.S.W.* 110 (4), (1988) 1989: 407-410.

Stilbopteryx mouldsorum sp. n., a very distinctive species of lacewing, is described from Western Australia. It has a colour pattern not found in any known species of the genus. New distribution records, based on material in the collections of the Australian and Queensland Museums are given for the other species of Stilbopteryginae.

C. N. Smithers, Research Associate, Australian Museum, College Street, Sydney, Australia 2000; manuscript received 12 April 1988, accepted for publication 20 July 1988.

INTRODUCTION

The genus *Stilbopteryx* Newman, with six described species, and *Aeropteryx* Riek, with three species, constitute the subfamily Stilbopteryginae of the Myrmeleontidae. They include some of the largest and most spectacular Australian lacewings. Some species have a wing length of up to 50mm. Very little is known of the biology of this group. Of only one species (*S. linearis* Navas) is the larva known (McFarland, 1968). Development from egg to adult took six years in culture. Both sexes of the species of *Stilbopteryx* are known, except for *S. albosetosa* Riek of which males have not been found. All three species of *Aeropteryx* are known from males only.

Riek (1968) published a key which included six of the seven species known at the time. Later (Riek, 1976) he described two more species and included them, with all seven previously known, in a revised key. He also listed the synonyms for each and gave information on the distribution of the species. New (1982) discussed the status of the genera, which at that time were usually included in the family Stilbopterygidae. He gave reasons for considering them to constitute a subfamily of the Myrmeleontidae.

During study of collections in the Australian and Queensland Museums a female of a very distinctive, undescribed species of *Stilbopteryx* was found as well as material which increased knowledge of the distribution of the other species. This material forms the basis of this note. For the sake of completeness the previously known distributions of the species are summarized.

In the list of material the initials 'M.S.M.' and 'B.J.M.' indicate specimens collected by M. S. and B. J. Moulds respectively and 'AM' and 'QM' the Australian and Queensland Museums.

DESCRIPTION AND RECORDS

Stilbopteryx mouldsorum sp.n.

Female: Head very dark brown, slightly paler on each side of epicranial suture. Front of head anterior to lower level of eyes creamy yellow. Antennae very dark brown, club with pale transverse bands. Setae on scape black. Pronotum dark brown with creamy yellow bands along anterior and posterior margins. Setae black. Pterothorax dorsally dark brown. Setae on anterior half of mesonotum mostly black, some thoracic setae white. Thorax laterally grey-brown, setae mostly white. Legs very dark brown. Abdominal

segment 1 very dark brown; segment 2 very dark brown with narrow creamy yellow posterior border; segments 3-6 very dark brown with very broad anterior and posterior creamy yellow bands; segment 7 similar but bands narrower. There is as much creamy yellow area as darker colour in the basal half of the abdomen. Ectoprocts very dark brown with creamy yellow postero-dorsal border and similarly coloured patch near base. Eighth and ninth tergites very dark brown with paler hind borders. Posterior gonapophyses long and narrow with black setae, similar to those of *S. linearis* Navas. Fore wings with costal area hyaline but dark brown just basad of creamy yellow pterostigma. Radial area with infuscation reaching hind margin of area distally before pterostigma. The dark brown band formed by these coloured areas is continued beyond the pterostigma adjacent to the wing margin anteriorly, around the wing apex and along hind margin of wing, tapering to end about half way along hind margin. Costal crossveins, Rs and its branches and veins and crossveins posterior to CuA creamy yellow. Other veins dark brown. Hind wing costal area brown almost from base with crossveins nearly all brown. Other markings as in fore wing but veins and crossveins posterior to CuA mostly brown. Fore wing length: 45mm. Body length: 42mm.

Male: Not known.

Material examined: 1 ♀ (holotype), Western Australia, 3km from West Strelley River, approx. 70km SE Port Hedland, 16.ii.1977. M.S. and B.J. Moulds. Holotype in Australian Museum.

Discussion: *Stilbopteryx mouldsorum* is recognizable by its colour pattern. It is the only species in the subfamily in which the brown band along the front of the wing is continued beyond the apex and along the hind margin. The creamy yellow pronotal marks are more extensive and stand out more clearly than in other species. The similarly coloured areas on the abdomen are so extensive and conspicuous that they give the abdomen a banded appearance. In other species these areas are much smaller and appear as isolated spots.

Stilbopteryx linearis Navas

Recorded distribution. *South Australia:* SE Lake Eyre North, near Muloorina homestead; Prescott Point, Madigan Gulf, Lake Eyre North; Killalpanima, 160km E Lake Eyre.

New record. *South Australia:* 1 ♀, Arkoola, northern Flinders Ranges, 21.i.1976, M.S.M. and B.J.M. (AM).

Stilbopteryx albosetosa Riek

Recorded distribution. *Northern Territory:* Murella Park; Daly Waters; Jabaluka Lagoon, 14km N. Mudginbarry head station; 1km S Cahill's Crossing, East Alligator R; 5km NNW Cahill's Crossing, East Alligator R.

New records. *Northern Territory:* 3 ♀, Waterhouse R., Mataranka Hstd., 23.xii.1968; 1 ♀, McArthur R., 15km S junction Carpentaria/Tablelands Highway, 12.i.1986, M.S.M. and B.J.M. (AM). *Queensland:* 1 ♀, Almaden, Chillagoe dist., i.1932, W. D. Campbell; 1 ♀, swamp, 28km N Leura, 30.xi.1974; 2 ♀, East Haydon, 60km SE Normanton, 15.i.1986, M.S.M. and B.J.M. (AM).

Stilbopteryx walkeri Kimmins

Recorded distribution. *Queensland:* Moreton Bay; Fletcher; Eidsvold; Rifle Range, Biggenden; Bundaberg; Crystal Creek, 35km SE Ingham; Clermont; Stradbroke Is.; Carnarvon Range; Almaden, Chillagoe dist.

New records. *Queensland:* 2 ♂, Moffat Nat. Park, The Chimneys, 14.xii.1987, Monteith,

Thompson, Yeates; 1 ♀, Blackdown Tablelands, via Dingo, 1984, S Pearson (QM); 1 ♀, Miriam Vale, Mt Larcom area, 27.xii.1966; 1 ♀, Bauple, 14.xii.1977; 1 ♂, Doolandella, Brisbane, 12.i.1985; 1 ♂, Boomerang Range, 30km W Marlborough, 8.xii.1980; 1 ♀, Lawn Hill Creek, Adel's Grove, W Gregory Downs, 19.xii.1986, M.S.M. and B.J.M. (AM). *New South Wales*: 1 ♀, 20km N Grafton, 21.i.1975, J. Frazier; 1 ♂, Calumet, 26km NE Binnaway, 16.xii.1931, C. F. Garnsey; 1 ♀, Wheecogo, near Dunedoo, i.1971, W. Gaden; 1 ♀, Mann R., 5km upstream from Old Glen Innes—Grafton Rd., crossing, 16.xi.1977, M.S.M. and B.J.M. (AM).

Stilbopteryx napoleo (Lefebvre)

Recorded distribution. *Western Australia*: Waroona; Yallingup; Swan R.; Yanchep; Perth; 'NW New Holland'; 'South and west Australia'. *Northern Territory*: 99km NNW Alice Springs. *South Australia*: Coorong Nat. Park.

New records. *Western Australia*: 1 ♀, 30km S Mendurah, 13.1.1971; 1 ♀, Waylunga Nat. Park, 35km NW Perth, 6.1.1971; 2 ♂, 1 ♀, John Forrest Nat. Park, Darling Ranges, 21-23.i.1971, G. A. Holloway and H. Hughes (AM).

Stilbopteryx costalis Newman

Recorded distribution. *New South Wales*: Sydney; Shoalhaven; 42km NE Binnaway. *Queensland*: Stradbroke Is.

New records. *Queensland*: 1 ♂, Brisbane, 4.xi.1936; 1 ♂, 1 ♀, Carnarvon Range, 7.xii.1941; 1 ♀, Milmerran, 21.xii.1941, J. Macqueen (QM); 1 ♀, Cloncurry, 19.i.1984, M.S.M. and B.J.M. (AM). *New South Wales*: 1 ♀, Waterfall, 31.xii.1978, D. Doolan; 1 ♂, Loftus, 27.xii.1978, J. Olive; 1 ♂, Engadine, 16. xii.1976, M. Schneider; 1 ♂, Como, 9.xi.1961, L. Willan; 1 ♀, Norton's Basin, Nepean R., 19.xii.1916, A. Musgrave (AM).

Stilbopteryx auricornis Kimmins

Recorded distribution. *Western Australia*: Sherlock R.; Pinjara; 32km WSW Mt Magnet; 30km SE by S Carnarvon.

New records. *Western Australia*: 1 ♀, Carnarvon, 25.ii.1977, M.S.M. and B.J.M. 1 ♀, Marble Bar, 18.i.1974, G. Jones (AM). *South Australia*: 1 ♂, 1 ♀, Stuart Highway, 56km S Northern Territory border, 4.ii.1986, M.S.M. and B.J.M. (AM). *Northern Territory*: 3 ♀, Yalora Resort, Ayer's Rock, 1.ii.1984, M.S.M. and B.J.M. (AM).

Aeropteryx brocki (Manski)

Recorded distribution. *Queensland*: Kalpower; Little Crystal Creek, Mt Spec; Bluff Range, Biggenden.

New records. *Queensland*: 1 ♂, Edungalba, near Duaringa, 24.i.1982, M.S.M. and B.J.M. (AM); 2 ♂, Blackdown Tableland, via Dingo, xii.1978, Maywald, Czechura (QM).

Aeropteryx gibba Riek

Recorded distribution. *Northern Territory*: Deaf Adder Creek; Murella Park; Katherine Gorge; 7km NW by N Cahill's Crossing, East Alligator R.; 9km N by E Mudginbarry head station.

New records. *Northern Territory*: 1 ♂, Barkly Highway, 75km ESE junction with Tablelands Highway, 4.i.1987. M.S.M. and B.J.M. (AM). *Queensland*: 3 ♂, Little R., E Croydon, 15.xii.1986; 1 ♂, Iron Range, xi.1985, G. Wood (QM). *Western Australia*: 2 ♂, Kununurra, 6-7.i.1986, M.S.M. and B.J.M. (AM).

Aeropteryx monstrosa Riek

Recorded distribution. *Queensland:* Station Creek Spring, Silver Plains, Cape York. Eidsvold. Hammond Is.

New record. *Queensland:* 1 ♂, Station Creek, 15km N Mt Molloy, 30.xii.1973, A. and M. Walford-Huggins (AM).

ACKNOWLEDGEMENTS

I would like to thank the many collectors of the material listed, especially Max and Barbara Moulds, for the considerable amount of material donated to the Australian Museum. The Director of the Queensland Museum kindly allowed me to study its material.

References

- McFARLAND, N., 1968. — (Cover picture.) *Friends of S. Aust. Mus.* 7: 1-2.
NEW, T. R., 1982. — A reappraisal of the status of the Stilbopterygidae. (Neuroptera: Myrmeleontidae). *J. Aust. ent. Soc.* 21: 71-75.
RIEK, E. F., 1968. — A new genus and key to species of Australian Stilbopterygidae (Neuroptera). *J. Aust. ent. Soc.* 7: 105-108.
——, 1976. — The family Stilbopterygidae (Neuroptera) in Australia. *J. Aust. ent. Soc.* 15: 297-302.